

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:  
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Date of mailing  
(day/month/year) **08.3.2005**

Applicant's or agent's file reference  
**309PCT**

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
**PCT/JP2004/018955**

International filing date (day/month/year)  
**10.12.2004**

Priority date (day/month/year)  
**12.12.2003**

International Patent Classification (IPC) or both national classification and IPC  
Int.Cl. **C09D175/04, C09D7/12**

Applicant  
**SANYO CHEMICAL INDUSTRIES, LTD.**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Date of completion of this opinion

**08.02.2005**

Name and mailing address of the ISA/JP

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**4V 9051**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/018955

Box No. I      Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing  
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format  
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE  
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International application No.

PCT/JP2004/ 018955

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>14, 15</u>	YES
	Claims	<u>1-13, 16, 17</u>	NO
Inventive step (IS)	Claims		YES
	Claims	<u>1-17</u>	NO
Industrial applicability (IA)	Claims	<u>1-17</u>	YES
	Claims		NO

2. Citations and explanations

1) The following documents have been considered for the purposed of this report:

D1= JP 59-98125 A(CELANESE CORP.)1984.06.06, whole document, especially claims & US 4423201 A & EP 107969 A2

D2= JP 06-80738 A(NIPPON SEISHI K.K.)1994.03.22, claims, [0019] (No Family)

D3= JP 10-508632 A(HERCULES INC.)1998.08.25, claims & WO 96/14357 A1 & EP 7 89725 A1

D4= JP 10-251556 A(SANYO CHEMICAL INDUSTRIES LTD.)1998.09.22, claims, [00 11] (No Family)

D5= JP 2001-507391 A(SHELL INTERNATIONAL RESEARCH MAATSCHAPPIJ BV)2 001.06.05, claims & EP 951494 A1 & US 6160040 A

D6= JP 2001-515118 A(EASTMAN CHEMICAL COMPANY)2001.09.18, claims & WO 99/09104 A1 & EP 1003819 A1 & US 2003/105197 A1

D7= JP 2002-521545 A(Rhodia CHIMIE)2002.07.16, claims & WO 2000/6641 A1 & FR 2781806 A1 & EP 1021483 A1 & US 6391952 B1

D8= DE 10313317 A1(TOYOTA JIDOSHA K.K.)2003.11.20, whole document & JP 2004-2706 A & US 2003/220444 A1

2) Novelty

D1 discloses a water-dispersed slurry coating, comprising a resin having a group containing an active hydrogen, a curing agent and a surfactant having hydroxyl groups, isocyanate groups, epoxy groups and phenols. Therefore, the subject-matter of claims 1-7, 9, 11, 13, 16 and 17 does not meet the requirement of novelty.

D2, D3, D6 and D7 disclose a water-dispersed slurry coating, comprising a resin having a group containing an active hydrogen, a curing agent and a surfactant represented by the general formulae (4) in the claim 10 of the invention. Therefore, the subject-matter of claims 1-6, 10, 13, 16 and 17 is not considered to be novel.

**Box No. VIII Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The surfactants used in claims 1-7, 9, 11 and 13-17 render the definition of the subject matters of said claims unclear for the following reason:

The surfactants expressed with only the functional groups or small portions of them. Therefore, the person skilled in the art would not envisage the whole surfactants as chemical compounds, even with consideration of common general knowledge. The surfactants such as chemical compounds should be specified with chemical formulae.

The surfactants used in claims 1-7, 9, 11 and 13-17 would comprise a variety of chemical compounds, however only limited examples are disclosed in the specification and the skilled person cannot make from the description of the specification even with consideration of common general knowledge, it is considered that those claims and description of specification do not meet the requirements of PCT Articles 5 and 6. This opinion was made on the basis of the disclosed examples in the specification. The subject-matter of claims 8, 10 and 12 are considered completely.

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of: ☒

D5 discloses a water-dispersed slurry coating, comprising a resin having a group containing an active hydrogen, a curing agent and a surfactant having epoxy groups, a carboxyl group, hydroxyl groups and an amino group. Therefore, the subject-matter of claims 1-6, 13, 16 and 17 does not meet the requirement of novelty.

D8 discloses a water-dispersed slurry coating, comprising a resin having a group containing an active hydrogen, a curing agent and a surfactant represented by the general formulae (1)-(3), (5) and (6) in the claims 8, 10 and 12 of the invention. Therefore, the subject-matter of claims 1-13, 16 and 17 does not meet the requirement of novelty.

**3) Inventive Step**

The person skilled in the art would easily select the size and the shape of resin particles among them generally used. Therefore, the subject-matter of claims 1-17 does not appear to involve an inventive step over D1, D2, D3, D4, D5, D6, D7 and D8.

**4) Industrial Applicability**

The industrial applicability of claims 1-17 seems evident.